HEALTH EDUCATION in MALARIA ERADICATION PROGRAMME (INDIA)

Edited by
Dr. B. N. BHATTACHARJEE

NATIONAL HEALTH PROGRAMME DIVISION
CENTRAL HEALTH EDUCATION BUREAU
NEW DELHI

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PREFACE

The sole purpose of this monograph is to help solve the serious problem of complacency and lack of co-operation of people in the on-going of National Malaria Eradication Programme, India which is the world's largest public health campaign against a communicable disease. A publication of this kind is bound to leave much room for improvement, for which suggestions are cordially invited. We are grateful to Dr. S. L. Dhir, Director, National Malaria Eradication Programme, India and Dr. B. S. Sehgal, Director, Central Health Education Bureau for rendering valuable suggestions for improvement by devoting their time in going through the material. We hope this book will prove beneficial to other malaria eradication programmes besides India's.

B. N. BHATTACHARJEE

FOREWORD

National Malaria Eradication Programme, a crash and time limited programme in the early years, has progressed well even without much health education support because results of DDT spray were so dramatic and convincing in the disappearance of mosquitoes and other domestic pests that it brought forth the willing co-operation of the people. In the early years of the use of DDT, flies, fleas, cock-roaches, bed bugs, etc., were killed but in the later years almost all insects, except the malaria vectors, acquired resistance to insecticide. Further, due to steep decline in the incidence of the disease, complacency cropped up in the public, leading to lack of willing co-operation in the matter of spray and collection of blood slides from all the fever cases.

At present customs and traditional practices of mud plastering, religious biasness in some tribal and backward areas are hampering the progress of the programme. As such the need of a concerted health education campaign is all the more necessary.

Keeping this in view, Dr. B. N. Bhatacharjee, DADG (NHP), CHEB, who is assisting in the preparation of health education material for NMEP, has produced this valuable monograph by putting together all the available material for ready use by the States and Union Territories, who are actually responsible for the implementation of the programme.

I trust this booklet will be very useful in promoting health education relating to National Malaria Eradication Programme.

J. B. SHRIVASTAV
Director General of Health Services,
Government of India,
New Delhi.

CONTENTS

NATIONAL MALARIA ERADICATION PROGRAMME

Dr. S. L. Dhir, Director of National Malaria Eradication Programme has focussed the problems in malaria eradication programme which have great significance to health educators and malaria administrators for finding ways and means of meeting them.

EDUCATIONAL PROBLEMS OF N.M.E.P.

Dr. S. L. Dhir

The India's National Malaria Eradication Programme was launched in 1958. In the earlier stages, good and willing cooperation was forthcoming from the community because the menace of heavy ravages of this disease were yet fresh in their minds. According to an estimate made in 1952, nearly 75 million cases of malaria occurred every year, i.e., nearly one-fourth of the country's population used to suffer from malaria. Out of these, nearly 8 million died every year due to direct effects and equal number due to indirect effects of malaria.

Initially the people extended their full support and willing cooperation to the NMEP with a hope to get relief from the havocs of malaria. Further, in the earlier stages of the programme, the use of DDT (insecticide) was accompanied by visible collateral benefits like freedom from bedbug nuisance, house flies and other pests. As the programme progressed satisfactorily, the morbidity and mortality from malaria were reduced dramatically. The incidence of the disease during the year 1968, as ascertained through adequate surveillance operation after examining about 40 million blood slides, indicated that the total number of malaria cases was reduced to 2.27 million only which reduction is to the extent of 99.7% of the original incidence of 75 million cases in the country during 1952. This virtual disappearance of malaria brought in an element of complacency in the general population leading to lack of adequate cooperation particularly in matters of spray and collection of blood slides. Further, due to continuous use of insecticide over a number of years in certain areas of the country, bed bugs developed resistance to insecticide. As such the bed bug nuisance could not be got rid off. Certain communities in the country, who are averse to killing of insects on religious ground have also withdrawn the little cooperation they had extended at the beginning of the campaign and the spray coverage in such areas has fallen as low as 20 to 30 per cent. Apart from these,

there are many other problems which have created operational difficulties in the implementation of malaria eradication programme. The problem of refusals to spray due to bed bug nuisance and to religious beliefs was earlier investigated by the National Malaria Eradication Organization through the Central Health Education Bureau in Gujarat and Orissa States. The details of these studies are given in this monograph. The other problems which need investigation and solution from NMEP's point of view are as under :

1. **Nomadic Population**

On this problem the following aspects require immediate studies :

—Cultural pattern of the nomads.

—Pattern of movement in nomads and factors determining these.

—Belief, knowledge and attitude regarding malaria among nomads.

—Customary practices among the nomads regarding malaria and other communicable diseases.

—Group interaction within various nomadic tribes, as well as the general population.

—How to bring about favourable behavioural changes in nomads in respect of NMEP.

2. **Mud Plastering of Houses in Tribal Areas**

Extensive tracts in Central India (in the States of Madhya Pradesh, Gujarat, northern part of Maharashtra, Rajasthan, Southern U.P., Chhota Nagpur Division of Bihar and central part of Orissa) are inhabited by various groups of tribes having different social, religious backgrounds and practices. It has been observed that in these tribal areas people do not refuse to accept DDT spray but due to their religious sentiments and social customs they do not allow the DDT to remain on the walls for a long period. The housewives usually plaster the houses with mud, thus rendering insecticides ineffective for malaria control. The mud plastering is carried out regularly on various occasions in spite of repeated requests from the

NMEP organization not to do so. Intensive studies to find out the ways and means for preventing frequent mud plastering in these areas are essential. Most of these areas are hard-core areas of the NMEP where in spite of 11 years of spray operation, the transmission could not be interrupted. These areas provide nearly 70 to 80 per cent of the cases recorded in the country. The studies required to be carried out are :

—Knowledge and practices of various tribes regarding malaria.

—Knowledge and attitude towards insecticide spray operation in the tribal community.

—Social and religious beliefs which motivate the tribal people for frequent mud plaster. It is also essential to ascertain the depth of such beliefs for finding out the methods for preventing frequent mud plastering in such areas.

—Motivational and behavioural changes and methods for employing them for overcoming mud plastering in tribal areas.

3. Urban Malaria

In the urban malaria, the following important topics have got great bearing on the implementation of anti-larval measures and social studies for finding out appropriate solution.

—Developmental programmes and the social customs which are responsible for the dissemination of the disease.

—People's perception regarding mosquito and malaria.

—People's attitude towards NMEP and anti-larval measures.

—Practices of people for prevention of breeding places in clean water.

—Leadership identification in urban areas which could help in putting through the anti-larval operations.

4. Focal Outbreak in Maintenance Phase Areas

In the maintenance phase areas, the vigilance activities are taken up by the General Public Health Services. These

activities are directed towards the prevention of introduction of malaria in the maintenance phase areas as well as for finding out old residual foci and elimination of such foci. In this connection the following social aspects require consideration.

—Community leadership, ways and means of involving such leaders for notification of fever cases.

—Ways and means to improve acceptance of Basic Health Workers for vigilance activities in the area by the community.

—Attitude of health workers in malaria maintenance areas especially Basic Health Workers.

—Community leaders, their knowledge, belief and attitude towards disappearing malaria.

5. **Workers' Resistance**

The NMEP was started as a time-limited programme and it was expected to be completed by 1967 and thereafter in 1970. However, due to various reasons, the programme is to be continued beyond schedule and has been rephased to be completed by the year 1975-76. The employees under the NMEP were taken up on temporary basis because of the temporary nature of the programme. Such employees have continued to work under the programme over the last 10 to 12 years without any security of service. Even though the programme has been extended upto 1975-76, there is no assurance regarding the security of the service of the NMEP employees. As such the morale of the staff has deteriorated and it has affected adversely implementation of the programme in the field. In this respect the following points need immediate investigation

(i) Knowledge of workers regarding NMEP and ultimate fate of their service.

(ii) Attitude, belief and loyalty of workers towards NMEP.

(iii) Methodology to boost morale and initiative of field workers.

(iv) Effect of low morale and other factors in insufficient coverage under NMEP.

(v) Ways and means to effect behavioural changes among NMEP workers.

6. Special Groups Problem

Special groups and sects have posed a serious problem for NMEP workers over a long time. As has been indicated above, the insecticidal coverage in Gujarat in Jain community households has always been low. Similarly, there are other groups which refuse to accept the insecticidal coverage and surveillance operations. For such groups special studies are required to be conducted to find ways and means to make the NMEP more acceptable to these groups. The various groups in this category are :

(i) Religious groups
(ii) Resistant groups
(iii) Project labourers
(iv) Landless agricultural labour, and
(v) Political groups.

It is necessary to study the attitude, belief, knowledge and practices of the above groups in relation to malaria. Further studies should be conducted on the methodology for winning such groups for active participation in implementation of malaria eradication programme.

Health Education Programme should in fact essentially precede the actual launching of any time limited programme. Unless the people are prepared to cooperate and participate and accept the programme as theirs (and not of the government) the progress for success remains always doubtful and insecure.

Research studies were carried out by the Central Health Education Bureau Team in Bhuj district of Gujarat State where there were heavy refusals of DDT spray by the people. The study revealed a number of factors responsible for the refusals. An educational campaign was also carried out in this area to demonstrate the methodology of winning people's participation in National Malaria Eradication Programme. Today's problems in malaria need many more studies in different parts of the country.

WINNING PEOPLE'S COOPERATION IN NATIONAL MALARIA ERADICATION PROGRAMME

*C.H.E.B. TEAM

One of the major barriers to the success in malaria eradication programme is the growing resistance of the people to DDT spray in their houses. The present study was undertaken in the Kutch district of Gujarat State by the C.H.E.B. in collaboration with the State Health authorities to identify the causes of people's resistance to DDT spray and to determine the ways and means to overcome this resistance and enlist people's active cooperation in the programme. A three-week research-cum-action campaign was undertaken in 23 villages of Mundra Taluk of the Kutch district. The main purpose was to organize a programme with the available resources so as to develop a methodology of work which is capable of duplication on a large scale. These 23 villages had a total population of 16,782 and the people were predominantly Jains and Rajputs.

Objectives

The objectives of this research-cum-action campaign were as follows :—

(i) to identify the factors determining people's response towards DDT spray;

(ii) to plan and implement extension-cum-service programme in favour of DDT spray; and

(iii) to evolve a methodology of organizing education-cum-spray operations which is capable of duplication on a larger scale.

Methodology of the Campaign

The methodology of work included discussions with State and Regional malaria authorities; interview with Development, Publicity and Health authorities at district

*Team members :

Dr. B. N. Bhattacharjee—Malariologist-cum-Health Educator

Mr. H. Dhillon—Social Scientist

Mr. T. K. Parthasarthy—Publicity Expert

Mr. P. K. Sharma—Social Scientist

and block levels; discussions with Zila Parishad, Panchayat Samiti and Welfare organizations; interview of DDT spray workers and supervisors, and selected villagers. The main purpose of this was to understand the problems, pattern of work and the factors which have been influencing people's resistance to DDT spray. Secondary data was also collected to find out the population characteristics and the spray coverage during the last three years.

Programme Planning—The action strategy was worked out through a three-way planning with Health authorities, development agencies and the community representatives at the State, District, Block and Village level. Discussions at the State level helped in understanding the problem and developing a broad strategy of work. At the district level efforts were directed towards securing administrative approval and support to involve the Development, Education, Revenue and Publicity departments, and panchayat organizations. At the block level active involvement of the block development and Health authorities was sought in working out the details of the programme and involvement of their workers at the village level (Village Level Workers revenue personnel school teachers and health workers).

Implementation—Selection of villages and spray schedule was carefully worked out in consultation with the spray team and B.D.O. who had an intimate understanding of the local area. The likely response from villages to the spray work, local facilities for the stay of workers and storage of materials and the cooperation of local leaders and local workers were considered for developing the spray plan. Prior to launching the spray, a block level meeting of the field workers was organized, arrangements for advance intimation and announcement spray schedule were made, meetings were held with religious heads and members of Panchayat, materials were prepared and the strategy of work at village level was worked out. In each village a meeting was held an evening in advance with the village officials and representatives of different communities to enlist their views, secure their cooperation and prepare the list of volunteers to help in this work. Announcements about the spray programme were arranged by the Gram Panchayat through traditional announcer (Sad-Parna) in every village a day before starting spray work. **Prabhat pheries* were organised with the help of

*Community processions

school teachers and publicity materials were displayed and distributed by the local volunteers. Spraying was started from the houses of village pradhan and influentials so as to demonstrate their cooperation in the programme. Individual persuation of resistant cases was attended to with the help of cooperative community leaders, the neighbours who had accepted spray and with the help of local teacher VLWs, health and other functionaries.

Major Findings

The study showed that the work of the DDT spray team is carried out in isolation without the involvement of health and development agencies, people are ignorant and apathetic towards the programme, there are apprehensions and doubts in the mind of the people about DDT spray, and a variety of operational problems hinder the success of the programme. These problems are briefly discussed below :

Working in isolation—The entire load of the programme is at present carried by the malaria team alone. Hardly any organized efforts are made to involve the health and development authorities in the planning and operation of the programme. It was observed that the cooperation of the district development authorities, the publicity department and the Zila Parishad is not effectively sought. The district health authorities are also not actively involved in planning of the programme and mobilization of resources. In the context of the growing resistance and indifference of the people this tendency of working in isolation and to carry out the programme with limited resources of malaria unit itself is dangerous. At the block level, the resources of the community development and the primary health centre are hardly utilised for the operation of the programme. Consequently, no support is received from the local functionaries during the spray work in villages. In most cases the Gram Panchayats do not receive advance intimation about the spray work and hardly any efforts are made to enlist their active involvement and participation. The spray work is carried out without the help of VLW, *Tallati, school teachers, health staff and community leaders. At a time when people were keen and enthusiastic about DDT spray, the work could be effectively carried out by the spray team itself. But the active involvement of the local functionaries and community leaders has now become essential to persuade the people for acceptance of DDT spray.

*Revenue Personnel

Realising the urgency of the problem, the zila parishad and Panchayat Samiti issued appeals to the people for their cooperation in the programme, local press published news items on the dangers of malaria, the need for spray and the spray schedule. The press also published the appeal of the pradhan of the Zila Parishad. The programme was put on the air with the cooperation of the local branch of the A.I.R. The district authorities issued instructions for co-operation in the work. With the help of the Block Development Officers, active involvement and support of the VLWs, Tallati school teachers and Gram Panchayat was secured. Under the leadership of the local medical officer, the primary health centre staff extended full cooperation in spray work. The development authorities helped in securing site and storage facilities in villages and in sending advance intimation to Gram Panchayats about the programme. The cooperation from health and development authorities and block samities went a long way in enlisting people's cooperation in overcoming a variety of operational problems.

People's ignorance and apathy—There is widespread awareness amongst the people about the decline in fever (malaria) cases during the past few years. But they do not attribute this decline to the DDT spray. The spray team is thus denied the reward of their efforts and result shown by them. Malaria is not considered as serious a threat now as it used to be considered earlier. It is perceived as a minor ailment. Consequently, they tend to be indifferent and apathetic towards anti-malaria measures.

The link between DDT, mosquito and malaria is not understood by most people. It is believed to be caused by 'Rut Phar', *i.e.*, exposure to sudden change in temperature.

Expectations from DDT—DDT spray was enthusiastically sought in the earlier years not for reasons for health but to do away with the nuisance of mosquitoes, bed bugs and insects. With the growing immunity of the insects to DDT, it no longer meets their expectations of protection from nuisance of insects. They attribute this to the deterioration in the quality of DDT, thereby the increase in refusals.

Apprehensions and fears—People carry a negative image of DDT. It is a widespread belief that the spray of

DDT increases bed bug nuisance. This is such a strong belief that even the local health and development staff share it with the rest of the community. It may be stated that one of the major felt needs and problems expressed by the people in this area is the bed bug nuisance. Anything which is likely to further aggravate this problem is likely to be rejected by the people.

In the absence of motivation for DDT spray, it is considered too inconvenient to arrange the household goods to permit spray; this is perceived as an unnecessary trouble. Further, the spotting of walls caused by DDT spray is objected to; in this area most people keep their houses beautifully plastered with coloured mud and the rich go in for expensive distamper of walls.

Cultural Factors.—The customs of the people like periodic mud-plastering of walls, caste system, social barriers to permitting persons of other castes to enter the house, particularly the kitchen, and prevalance of pardah in certain communities influence the acceptance and act as barriers to spray work. The spray is often refused when there is sickness, new born baby or advanced stage of pregnancy and guests in the house.

It has been observed during this campaign that if the educational contents are carefully determined and systematic and well planned educational efforts are made, it is possible to overcome these barriers and persuade people to accept spray. Publicity efforts, involvement of community leaders and local functionaries, holding group meetings and individual persuasion of refusals with the help of cooperative neighbours and acceptors are effective in raising the level of acceptance and willing cooperation of the people. This has to be coupled with the strong-felt need of the people for the destruction of bed bugs. This was possible by mixing diazinon with DDT. The effect on bed bugs had to be repeatedly demonstrated to secure acceptance.

Other Organisational and Operational Problems

Smooth execution of the spray programme is hampered by frequent break-down of transport, tight work schedule permits limited time for persuasion, inaccurate enumeration of houses, absence of facilities for storage of materials

and stay of workers, low morale and drop out of the workers, and lack of cooperation from local workers.

The spray schedule is structured without providing adequate allowance for transport breakdown and allied problems. Though the work pattern provides for advance intimation to villagers, this is often not done. Furthermore, the schedule has to be frequently changed, and these changes are not intimated to the concerned villagers.

The spray schedule does not provide adequate time for educating efforts. This is often tightly structured based on the earlier spray schedules when the coverage has been low. It does not provide for mopping up operations to make a second attempt to cover the refusals and locked houses. The DDT supply is also assessed and carried in accordance with the earlier low coverage and in case the coverage is raised the team is likely to fall short of supplies.

The timings of spray work are not worked out considering the convenience and availability of villagers. The spray work is generally carried out in a routine official way from 10 a.m. to 5 p.m. with lunch break. The coverage is likely to be high in the early mornings, during noon and in the late evenings when males are more likely to be at home. In the absence of male members, the women tend to avoid inconvenience and discourage the entry of male members in home and refuse spray.

The workers' morale is rather low, the work is hard and less remunerative as compared to the workers in construction and allied development projects. The workers tend to move out for agricultural work soon after rains when the peak agricultural season begins. It is considered hard work, for the workers have to walk long distance, do not have facilities for stay, cooking food and medical care. Besides, the payment of wages is often delayed.

Limitations in the educational approach include inadequate programme planning, lack of workers trained in health education, lack of publicity and educational materials, lack of coordination with other development departments, and involvement of local organizations and leaders and utilisation of available community resources. The supervisory staff when oriented to educational approach becomes alert to the need of involvement of local workers and community leaders.

Suggestions

This campaign brings out certain implications for developing a methodology of work which is likely to be more effective in enlisting people's cooperation and raising the level of coverage by DDT spray, these include the following :

Break Isolation.—The tendency to work in isolation from other health and development agencies is dangerous and must be curbed. It is both desirable and feasible to secure the support and active involvement of the community development, education, publicity and health departments, panchayat organizations, welfare agencies and community leaders. The programme planning at the district level needs to be done in collaboration with the chiefs of the development departments. Their approval and administrative Support is necessary to secure the involvement of the functionaries at block and village level. The details of the spray operations, the village-wise spray schedule and utilisation of local resources have to be worked out jointly with the block development officers and primary health centre staff. It is with the help of the block level authorities that advance intimation can be sent to the villages; the local workers, including VLW, tallati, school teacher, chowkidar, patil and the health staff, can be briefed about the programmes and their responsibility, and the programme for mass publicity, group discussions, *parbhat pheries*, distribution and display of materials and persuasion of refusals can be realistically worked out. In the absence of active participation and support of the local workers, it is not feasible for the malaria team alone to undertake educational efforts which are likely to overcome the resistance of the people.

The local press, if properly approached, readily agrees to publish news items to create interest among the people about the programme. Radio broadcasts are often helpful in intimating the people about the spray operations in the area.

Educational Efforts.—The educational contents and messages need to be carefully determined in accordance with the local beliefs and customs. There is need to alert the people about the threat of malaria; unless the people perceive malaria as a serious threat and a danger for health

problem, they are not likely to willingly cooperate in the anti-malaria measures. The educational efforts may be aimed at correcting the expectations of people about DDT —that it is not intended to do away with mosquito and insects nuisance but to kill the vector and eradicate malaria—to remove the apprehensions of the people about DDT, the people's belief that it aggravates bed bug nuisance needs to be corrected, and if feasible alteranative insecticide may be added to meet this urgent need of the people. The people may be made aware that the decline in malaria has been brought about as a result of DDT spray, and this dangerous disease can be totally eradicated if all the houses are fully sprayed.

The educational strategy needs to be carefully worked out in consultation with local workers, Gram Panchayats and community leaders. Meetings may be held with them a day in advance to discuss the problem and seek their support in carrying out educational work and persuasion of the refusals.

The supervisory staff and the spray workers may be given orientation on health education, the educational methods and techniques. Arrangements may have to be made to provide adequate publicity materials to the local functionaries for display and distribution.

(iii) *Organizational Adjustments.*—The spray schedule may be worked out more realistically, providing allowance for transport, breakdown and other exigencies. The spray schedule should not be kept too tight, it should aim at full coverage and must provide time for educational and motivational efforts. Advance intimation may be sent to villagers and if there are modifications in the schedule, these may also be intimated in time, to the Gram Panchayats.

The timing of spray may be determined considering the convenience of the people. This is feasible if efforts are made to secure and provide facilities for stay and food so that the worker could work, if considered desirable, during early mornings, late evenings and during lunch hours.

Use of plastic sheets for covering the eatables may be emphasised. There is at present shortage of plastic sheets with worker. Perhaps this will help if the workers are provided uniforms and become a little more careful in building rapport with the families.

For malaria vigilance work in the maintenance phase areas, the Basic Health Workers should be able to understand the knowledge, attitude and practices of the local people to inculcate in them the spirit of active collaboration and participation for preserving the freedom from malaria which N.M.E.P. has achieved. National Health Programme Division of C.H.E.B. prepared a training guide and conducted two pilot courses for testing the effectiveness of health education training to Basic Health Workers for malaria vigilance work.

HEALTH EDUCATION TRAINING OF BASIC HEALTH WORK

(PERSONNEL IN MAINTENANCE PHASE OF N.M.E.P. IN INDIA)

Introduction

Out of many communicable diseases, malaria was one of the greatest health problems in India, hence a national campaign was launched in 1958 to eradicate this scourge from India. The task of eradication has now been achieved in more than 54 per cent of the country but this does not mean that there is no need for further work. In every field, particularly in the health activities, it is necessary to consolidate the gains achieved and maintain the same. This is true in NMEP as well, for there is always the risk of importation of malaria from outside. Unless there is adequate machinery to detect the cases as soon as they appear and the cases are treated in the appropriate manner, sooner or later there will be resurgence of malaria.

Vigilance in Maintenance Phase

Normally, the vigilance activities in the maintenance phase under NMEP should be undertaken though the general health services of the country. This is true for countries where such services are well developed. But in the under-developed countries it is hardly possible, unless there is considerable degree of staff augmentation at various echelons in the later part of consolidation phase. It should also be ensured that the staff provision made, should be adequate for the work-load assigned.

Basic Health Service

The malaria eradication campaign in India has proved that health services can reach every home. It has provided not only a base for the development of comprehensive rural health services in the country but at the same time created the need for rapid expansion of the basic health services in rural areas. It should, however, be stressed that the development of such services should be well planned, methodical and steady. The plan must also include facilities for training. It is also important that the large number of

staff coming from the various health programmes after completion of the assigned task and who have had long experience in a particular scientific field should receive suitable training in other fields. Whereas personnel of general health services should be given short orientation training in malariology, vaccination and inoculation work, the personnel from the different health programmes should receive orientation training in general health field and other specific programmes. For this, it is necessary to develop adequate training centres in every State. The question of re-orientation training of District Health Officers and Medical Officers of PHCs have to be kept in mind, for after all the operational responsibility of these programmes must finally vest on them.

Technical Personnel to be trained for Malaria Maintenance Phase

By the end of Fourth Five Year Plant it is expected that almost all the units, except some of them bordering other countries like Pakistan, Burma, Nepal will be in maintenance phase. So in future for 5,600 Primary Health Centres, large number of technical manpower in general health service will be required. In periphery approximately 50,000 of BHW will have to be provided. They have to be trained through short and long courses.

Since majority of the BHW will be recruited from various programmes like *NMEP, NSEP, NTCP etc., they will require job-oriented short training for 7 to 10 days and next by batches they may be sent for long term courses, which should not be less than one year period.

The number of training centres, training curriculum and staff needed, have to be worked out for different types of personnel like :—

1. District Health Officers
2. Block Medical Officers
3. Health Inspectors
4. Health Aassistants
5. Basic Health Workers

**NMEP—National Malaria Eradication Programme*
NSEP— National Smallpox Eradication Programme
NTCP—National Trachoma Control Programme

Responsibilities of B.H.W. towards NMEP

Basic Health Worker for his fever surveillance have to do the following :—

(a) Fever census.

(b) Enquiry about history of fever patients—local (Indigenous cases) and outsider (imported cases).

(c) Collection of blood smears from all types of fever cases.

(d) Administration of presumptive treatment to fever cases from whom blood smears have been taken.

(e) Visiting local practitioners, irrespective of the system of medicine, to enquire about the cases treated by them with anti-malarial drugs.

(f) Visiting village leaders, including Sarpanch, to record arrival of newcomers in villages including nomads, refugees etc.

(g) Prompt despatch of blood slides to the laboratory concerned together with the exact address and other necessary particulars.

(h) In case of focal outbreak—he should report immediately to health authorities.

Since the B.H.W. would be working all by himself in the community, it is absolutely necessary to give him maximum scope during the training to observe and participate fully, under guidance, in each activity. In other words, the practical training should be a process of "learning by doing".

Training Methods

Training should be conducted in regional languages as far as practicable and it will be field-oriented. Major period of training may be covered by practical, demonstration and field visits, supplemented with a few lectures on important topics.

OBJECTIVES OF TRAINING

General

To train the BHWs (Basic Health Workers) the new peripheral health vigilance staff—in the methods of

educating people, who in their turn may take up leadership, in maintaining the freedom from malaria.

Specific

(1) To formulate topics, methods, media, etc., for the effective training of BHW and Surveillance Workers.

(2) To make the training suitable to the job scheduled and practicable in the field situation.

(3) To evaluate the baseline knowledge of the participants of the training course.

Topics of the Course

1. Health education techniques.
2. Job descriptions.
3. Maintenance phase problems.
4. Educational problems in maintenance phase.
5. How to approach villagers and their community leaders.
6. How to create interest in things that people don't want to do.
7. How to collect base line data.
8. How to use media and various methods for health education in involving people.
9. How to conduct group discussion.
10. How to make evaluation of education activities.

Course Contents

1. What is Health Education.
2. How can it be utilised to overcome health problem.
3. What is malaria.
4. How NMEP has been operated through its different phases.
5. Why is D.D.T. sprayed.
6. Why is surveillance done.
7. What treatment is effective for malaria fever.
8. What is meant by malaria intelligence (notification of fever cases).

9. What is the importance of blood slide collection in the maintenance phase areas—how to perform blood slide taking.
10. How to organize health education campaign.
11. How to produce cheap media.
12. How to use media.
13. How to arrange meetings, group discussions, interviews and house to house visits.
14. How to collect suitable data for health education programme planning.
15. Method of speaking to groups (mothers, farmers, labourers, school teachers, students).
16. How to write daily diary and reports.
17. Co-ordination, liaison and cooperation techniques with voluntary institutions and employees of other departments.
18. Evaluation techniques.

Place of Training

In all training centres where the Basic Health Workers are being trained, physical facilities for training, living accommodation for trainees as well as staff and accessibility to neighbouring villages, are some of the prerequisites for training centres.

Training Staff

(1) Medical Officer (trained in malariology and having experience of NMEP work).....one

(2) Health Educator..... one

(3) Training Assistants .... two

Duration of Training

No. of weeks.....1

No. of working days.....6

No. of working hours.....36

Subjct Breakdown of No. of hours	*Lect.*	*Discussion*	*Demonstration*	*Practical*
1. Introduction	1	—	—	—
2. Malaria	2	—	2	2
3. Health Education	1	—	—	—
4. Methods	1	2	4	—
5. Media	1	6	—	8
6. Evaluation	1	—	—	—
7. Records and Reports	1	1	—	1
8. Visits and meetings	—	—	—	2

Time Table for Training

1*st Day*—Registration.

—Introductory Lecture.

—Job description.

—Problems in maintenance of malaria freedom.

—Village health set-up and other organizations.

—Village community its link with District, State, and Centre (Government set-up—Role of people to play for the Nation).

2*nd Day*—What is Health Education ?

—How to interest people in maintaining freedom from malaria.

—What is malaria—How NMEP was operated in the country—Why vigilance is required in maintenance phase.

—How to make fever notification and blood slide collection.

—Why people do not take leadership in vigilance operation—how to motivate them.

—How P.H.C. can perform spray and treatment during focal outbreaks.

3*rd Day*—Presenting problems and approach in public health.

—How to collect base line data.

—Programme Planning.

—Media—mass media.
—group media.
—demiciliary media.

—Learning process and methods of imparting health education.

—Know the local culture, behaviour, attitude and practices of people towards health.

4th Day—How to prepare cheap media and utilize them.

—Method of speaking to groups.

—How to organize campaigns.

—How to build up talks during house to house visits in villages.

—Identification of spots (places) for group involvement and media demonstration.

—How to collect opinion of the public.

5th Day—How to write daily diary and reports.

—Techniques of co-ordination, liaison and co-operation with voluntary organizations and employees of other departments.

—Evaluation technique.

—Time and techniques of using health education kits.

—Public speaking methods.

—How to arrange meeting and group discussion.

6th Day—How to deal with supervisory officers and maintain discipline.

—How to prepare advance programmes and movement maps.

—How to organize committees and health clubs.

—Method of building up leadership and establish good relations with local people.

—How to deal with topics of villagers, other than health.

—P.H.C. and its ultimate objective.

7th Day—Discussion with training faculties.

—Performance test (presentation).

—Evaluation of training programme.

Methods to be used in Training

Lecture
Discussions
Field work
Group work
Role play
Assignments.

Teaching Aids to be used

Black-board
Flip-charts
Flannel graphs
Films.

Demonstrations

How to prepare blood slides.
How to make cheap media.
How to arrange exhibition.
How to speak in public group.
How to perform role play.
How to arrange campaigns.
How to make effective house visits.
How to make public relations.
How to use Health Education Kit.

Reference materials to be supplied to trainees

1. Malaria—NMEP simple booklet.
2. Cyclostyled note on health education technique (in simple language).
3. Catalogue of films.
4. Prototype exhibition materials.

A systematic health education effort is needed to bring about changes in the existing health practices of people. Until and unless changes in behaviour of people in relation to refusals of DDT spray, giving blood for examination and taking treatment for malaria are made, eradication of malaria may be delayed.

HEALTH EDUCATION AND MALARIA

Extension Education

Man's technical knowledge and achievements and the abundant resources available are not an end in themselves. What is important is what he does with these. Malaria technology, DDT, antimalarials. etc., are by themselves not enough to control or eradicate malaria. People's knowledge to practically utilise them and their active participation alone can eliminate the disease.

Health education is an informal educational process based on scientific principles from the social science and educational fields and is the best means of changing the existing practices of people, mostly adults. It can thus be defined as a process of extending new scientific knowledge to the masses to enable them change their thinking attitude and behaviour, in such a way that they 'help themselves in improving their lot. So this is a process of working with the people and helping them to become self-reliant not dependent on others. In short this means helping people by means of education to improve their knowledge of health work for them. This process is the essence of education.

No programme of eradication of a disease can be carried out successfully without the people themselves taking the responsibility of adopting suitable measures as and when needed. Getting houses sprayed with DDT notifying malaria cases, getting blood examination done are all essential activities which can be undertaken by the people and for which a systematic educational effort is needed.

The health education process has five components :—

(a) *Educational diagnosis*

The health educator finds out the existing knowledge and practices of the people, the factors which may determine the change.

(b) *Educational planning and implementation*

Based on the above diagnosis and utilising the principles of behavioural sciences and education, a plan is prepared in close collaboration with the people. This plan

comprises pertinent content for the education programme, suitable methods and aids. These are finalised after pre-testing in the field. The plan is then implemented with the active participation of the people.

(c) *Leadership participation*

The active involvement of the local leaders is necessary in the implementation of any national health programme. This helps providing satisfactory experience to those persons (leaders) who can influence others. This will also sustain support for the programme in the community.

(d) *Assessment and feed back*

It is useful to make a systematic assessment of the strength and weakness of the educational input at various stages of implementation. This will help improve the programme that is being implemented.

(e) *Services*

Right from the preparatory phase of any national disease eradication programme, health education has to go hand in hand with service. Only this will help sustain the people's interest in the programme.

STAGES IN THE ADOPTION OF NEW PRACTICES

People normally do not adopt new practice or ideas as soon as they hear about it. They may watch for several months before trying a new idea and this process becomes longer if the new practice is to be adopted permanently.

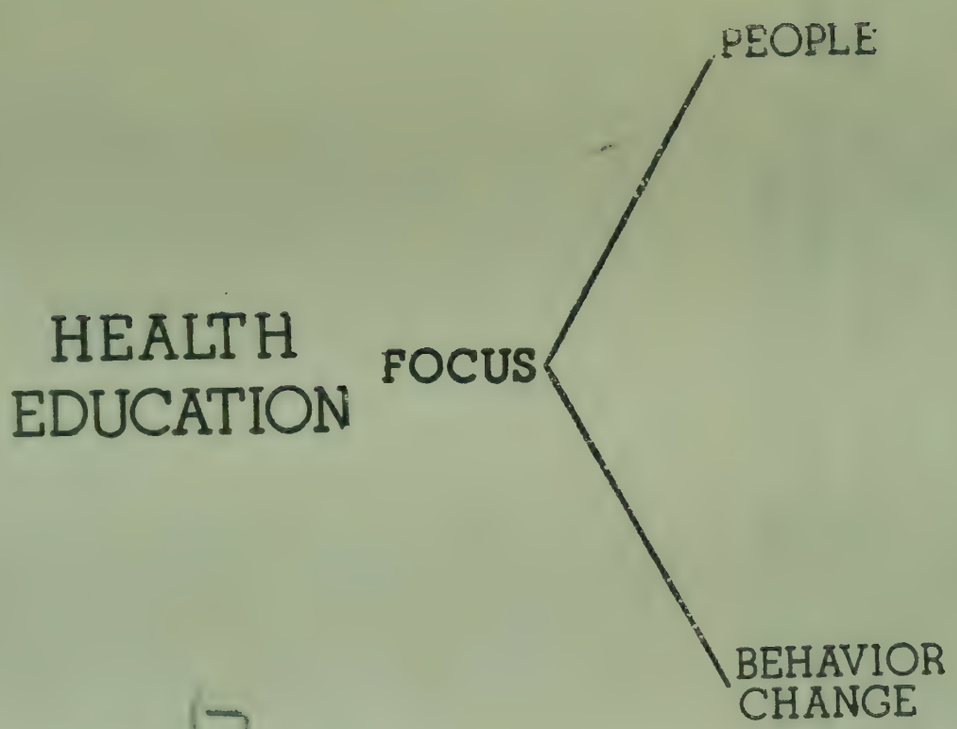
When a new practice is introduced, a person usually passes through a number of stages before adopting it.

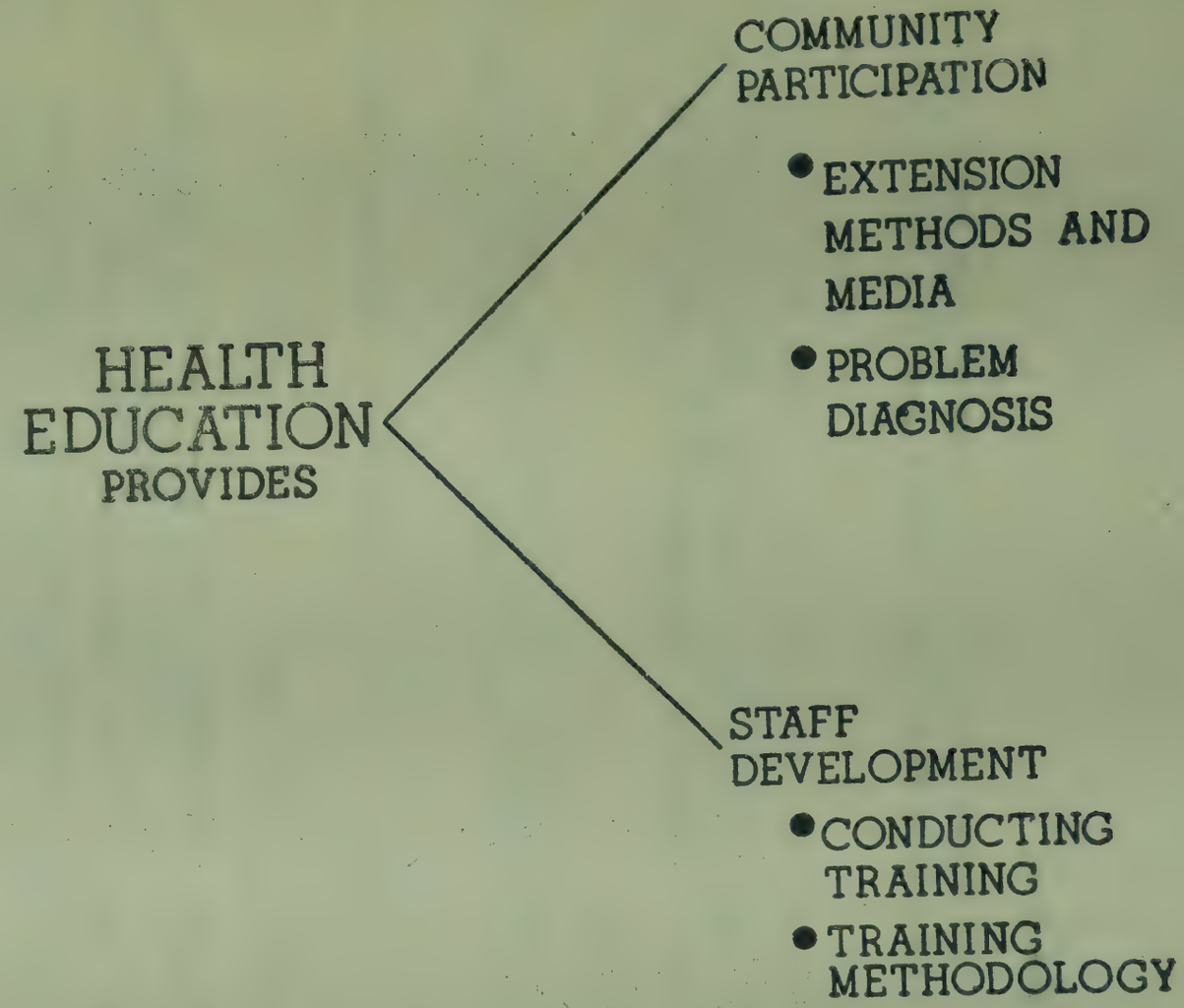
1. **Awareness**

He knows about the new practice but he lacks details about it.

2. **Interest**

He develops interest in the new practice and gathers more information and facts about the same to determine its possible usefulness and applicability.





3. **Evaluation**

He considers the pros and cons of this new practice. He is in a situation like this : "What benefit I shall derive out of this ?"

4. **Trial**

He may try out this news practice or idea tentatively and thus he acquires information on how to do it.

5. **Adoption**

The new practice is adopted in an increasing measure. He uses the idea continuously and becomes satisfied with it.

These stages are not necessarily rigid patterns which people follow.

Health Education—How

Extension education thus aims at the adoption of new practice by large number of people. It utilises different approaches for ultimate success. The staff at all levels needs training in proper selection of educational methods and media suited for different community groups. Suitable educational aids also need to be prepared and supplied to workers. The field workers need a thorough training in community organization. Whereas all field workers in malaria need training in health education, specialist health educators are needed at Central, Regional and State levels to plan and guide the educational strategy.

Workers should know the following regarding mass media and educational aids to organize an effective campaign in Malaria Eradication Programme of India.—

—Basic facts of the programme around which health education and publicity should be organized.

—How to prepare handbills in local languages.

—What slogans are to be highlighted for mass campaign.

—Collection of data and visuals for organizing exhibitions with colour.

—Press releases and radio talk techniques.

—Cinema shows and film strip demonstration.

Some such examples based on the field experience have been prepared by the Media Division of C.H.E.B. specially for the benefit of peripheral health workers.

HEALTH EDUCATION AND PUBLICITY ASPECTS OF MALARIA ERADICATION

Seventy-five million cases and one million deaths—this was what malaria claimed in India in 1952. This meant two deaths every minute. Besides, the economic loss on account of the debilitating effects of malaria on the people was estimated at Rs. 7,500 million.

Fifteen years later, in 1967, the picture was very different. Only 0.28 million cases were reported and there was no death due to malaria. The economic saving was of the order of Rs. 7,475 million. In other words, the economic loss had been brought down to Rs. 28 million.

The nation-wide Malaria control Programme was launched in 1953. This was designed to protect 200 million people living in malarious areas of the country. The programme also aimed at reducing the malaria transmission to such a low level that the disease would cease to be a major public health problem. The first three years of control operations (1953-56) brought down the incidence of the disease by about 50 per cent. The National Malaria Control Programme was switched over to one of eradication in April 1958. It was designed to protect the entire 390 million population of the country and aimed at complete elimination of the disease in the quickest possible time so that when anti-malaria measures are relaxed after a few years, the disease will not reappear.

Setbacks in malaria

But, recently there have been reports of focal outbreaks of malaria from certain parts of the country. There have been certain problems and operational difficulties in the implementation of the programme in some of the provinces. There has also been the lack of adequate organization to deal with the new problem of urban malaria and inadequate basic health services in areas where the National Malaria Eradication Programme had entered the maintenance phase. Due to these reasons, over 71 unit areas had to revert from consolidation and maintenance phases to attack phase.

Lack of people's support and reasons

Apart from the operational difficulties and problems, DDT spraying is one area in which the people should rise to the occasion and help implement the eradication programme. There has been much resistance in certain areas from the people for DDT spraying of their houses; some resisted DDT spraying on religious grounds, some were of the view that DDT increases bed bug nuisance and a considerable number were of the opinion that DDT is no more effective in killing mosquitoes. A few groups were of the poinion that DDT spoils posh furniture and disfigures distempered walls.

There have been complaints from the people that the members of the DDT Spray team do not behave properly with the public and that they litter their houses with *beedi* and cigarette stubs, etc. The spray team does not give any advance intimation about spraying schedule. In certain areas, where there is a shortage of water, people find it difficult to clean their houses after DDT spraying and hence refused spray.

Though the people recognise the sharp decline in the incidence of malaria, they did not relate the fall in malaria cases to the DDT spraying.

There is yet another area to consider. During the surveillance phase of the programme, which started in the late 1960, the malaria worker has been visiting every house to find out whether there had been any case of fever in the house during the month and collect blood smears from all patients to find out whether the fever cases were of malaria or not. Here also, people did not readily report the fever cases to the surveillance workers and resisted much to give blood samples for microscopic examination. People had their own apprehension for giving blood.

What needs to be done

Hence, opportunity should be taken to observe the Malaria Eradication Week every year. The objectives of such a campaign should be to educate the people on the purpose of the programme and its different phases so that the people understand the programme components and fully participate in the malaria eradication activities.

Planning the health education programme

While planning health education on malaria eradication it would be profitable if the Public Health Departments contact various social welfare organizations and convince them about the need of this health education and brief them about the pattern of activities proposed to be organized. The action programme should be worked out in detail. Every possible care should be taken to see that the programme so chalked out suits the needs of the programme as also the needs of the other collaborating organizations and institutions in the field as also the public Educational and publicity activities should centre round certain basic information germane to the present situation.

1. At the time of planning the programme, the organization should take the assistance of other departments like Education, Publicity, Broadcasting, Community Development, etc. They should be briefed about malaria and the activities of the N.M.E.P.

2. Local leadership should be involved to secure public participation.

3. Preparation and release of different types of educational and publicity aids like press-releases, talking points, features for use by community leaders, local medical practitioners, etc.

The publicity and educational efforts should centre round the basic facts about the disease and the control measures.

State level

Planning committees should be formed at the State level involving leaders of the area, including Members of Parliament, Legislators and prominent public personalities. The representatives of departments like Education, Publicity and Information & Broadcasting, State branches of Indian Medical Association, Social Welfare Organizations like Bharat Sewak Samaj, Social Welfare Board, Red Cross, etc.

State-level activities may include the following :—

1. Planning the programme for the health education with representatives of different organizations and leaders.

2. Arranging for publicising messages/appeals from the national and state leaders.

3. Arrangement should be made to utilise the broadcasting medium for talks by the State Health Ministers, popular leaders, panel discussions by experts on malaria control and other suitable programmes in local dialects for special audiences like Panchayat leaders, teachers, school children, housewives, etc.

4. Feature articles and handouts for the press should be released.

District level

At the district headquarters, district administrators and representatives of education, health and publicity departments, local leaders including members of Zila Parishad, Municipal Board and Members of the Legislatures and representatives of voluntary organizations should be taken into confidence to draw up a broad-based plan for education and publicity and local leadership should be involved to win the cooperation of people in DDT spraying.

Town and city leavels

It would be advantageous to have wards and zones of the city as separate units for planning health education. Zonal committees for each ward should be set up for developing and implementing the programme of the week.

A central committee for the whole town or city should be formed with the representatives from each of the zonal committees to coordinate their work.

Zonal committees may include representatives of the municipality (municipal councillors or those in-charge of health committees), district branches of Indian Medical Association, youth organizations, women's organizations, social and voluntary organizations of the area like Bharat Sewak Samaj, teachers, students, etc.

In industrial areas, trade union leaders and workers' representatives should be actively involved in the committee.

These committees should have three major functions:

1. To work out a general action plan for the respective zones and for the entire city in collaboration with other zonal committees under the guidance of health departments and the central committee.

2. To involve various local institutions and organizations and leadership for the development and successful implementation of the action programme.

3. The members of the different committees may subsequently look after the implementation of malaria eradication activities in their respective zones and follow-up the work on various projects initiated on health education.

The action plan may include :

(a) Organizing public meetings, panel discussions conferences and lectures by eminent personalities including doctors and local leaders.

(b) Arranging informative film shows and displays on malaria and distribution of publicity and education material.

(c) Organizing *prabhat pheries* and processions led by leaders of the locality, teachers and students.

(d) Arranging exhibitions and other display material.

Malaria teams should launch actual spray operations in different areas or *mohallas* with the help of zonal committees simultaneously working for winning cooperation of the people.

Schools and institutions

It need not be over-emphasised that schools and other educational institutions occupy a very important place in our society and their cooperation and active involvement is very essential for the programme. Teachers and members of other educational institutions are prestige persons in the community because of their education and their knowledge of scientific matters.

The members of the governing committees of schools and parent-teachers association may be actively involved and the schools and institutions may be encouraged to develop their programme for the health education. Essay competitions, drama, storey writing, display of exhibits and writing slogans may be organized in schools to stimulate the students' interest in the programme.

The authorities of the Directorate of Education and District Inspectors of Schools should be involved at the planning stage to secure their support for involving the schools to the maximum extent.

Labour colonies and slum areas

In labour colonies and slum areas, efforts should be made to involve the leaders, labour welfare officers, trade unions, public health personnel serving in those areas and members of voluntary and welfare agencies like Vikas Mandals, Bharat Sewak Samaj, Yuvak Mandal, Red Cross Society, Youth Organisations, Mohalla Committees in the planning and implementing the programme for health education.

At village and block level

Educational activities with regard to malaria eradication at village and block level may include planning and drawing out of a programme in consultation with the local leaders like Panchayat members, Gramsabha members and influential people of the area. Programmes for the health education should be worked out in collaboration with the PHC doctor and his staff. They should be encouraged to take specific responsibilities.

Activities may include :

1. Organizing public meetings, group discussions where the programme and its components may be explained.
2. Conducting leaders' training camps.
3. Arranging film-shows.
4. Display of posters (it useful to give the same to the village people).
5. Organizing *Prabhat Pheries* and *Bhajan Mandalies* with the help of teachers and students.

Cooperative venture

While planning and implementing the activities for the health education on malaria every possible effort should be made to make the different committees work it as a co-operative venture by distributing responsibilities to members.

A note of caution

We have discussed only a few suggestions for conducting health education programme. These are, however, not exhaustive. Those who are responsible for organizing the same have to work out the details of the programme taking into consideration the local needs and resources.

APPENDIX

A BRIEF SUMMARY OF THE REPORT OF THE STUDY ON WINNING PEOPLES COOPERATION IN NATIONAL MALARIA ERADICATION PROGRAMME WHICH WAS CARRIED OUT BY C.H.E.B. IN COLLABORATION WITH THE STATE HEALTH EDUCATION BUREAU, GUJARAT AND ITS RECOMMENDATIONS

The major findings of the study connected with DDT spray show that :

(a) Spraying operations are carried out in isolation without the involvement of health and other development agencies;

(b) People are even now ignorant and apathetic towards the programme;

(c) There are apprehensions and doubts in the mind of the people about DDT spray, and

(d) A variety of operational problems hinder the success of the programme.

These factors, therefore, need to be carefully considered in planning and conducting the spray operations. Special attention is invited to the following :

(1) Participation of health and other agencies in planning and implementing the field programme should be sought . The tendency to work in isolation from other health and development agencies is dangerous and must be curbed. It is both desirable and feasible to secure the support and active involvement of the Community Development, Education, Publicity and health departments, panchayat and community leaders.

At the district level, specific administrative instructions should be got issued to the staff in these departments for their involvement in getting people's participation at the local level.

At the block level, the details of the spray operations, the village-wise spray schedule and utilisation of local resources should be worked out jointly with the block development agency and the Primary Health Centre staff well in advance.

With the help of block authorities it must be ensured that (a) advance intimation is sent to the villages, (b) the local workers (V.L.W., school teacher, chowkidars, etc.) are briefed about the programme and their roles and responsibilities fixed.

The details of the programme for mass publicity including news items for the press, script for radio broadcast, cinema slides, film shows and distribution of publicity material should be worked out in full detail.

Systematic educational efforts should be undertaken to overcome ignorance and apathy of the people and remove specific doubts and apprehensions about the programme activities. The educational content and messages need to be carefully determined in accordance with the local beliefs and customs. The educational efforts need to be focussed at :

(a) Alerting people to the threat of malaria recurrence.

(b) Linking the incidence of malaria to mosquito and DDT through meetings, campaigns and publicity material.

(c) Overcoming apprehensions of the people about DDT—Building correct expectation that DDT is meant to eradicate malaria and not to destroy mosquitoes or insects, through individual contacts with local leaders, school teachers etc.

(d) The importance of completely spraying all houses.

(e) Correlating the expenditure on malaria and DDT in terms of national contributions and foreign exchange to focus people's attention on the loss which the country will suffer if services are not fully utilised.

(f) If feasible, the urgent needs of people in relation to bed bugs may be tied up with the spray operation.

Organizational arrangements

(a) Training of workers: All the field workers and supervisory staff should be given brief orientation to follow strictly all instructions issued for DDT spraying, and in methods and techniques of health education before each spraying operation.

(b) Arrangements for stay of workers in the field area in order that spraying can be done at the convenience of the local people be made.

(c) Transport arrangements etc. should be drawn out well in advance in order that the work schedule is not given up because of lack of supply of DDT, equipment, etc.

SAMPLE OF A LEAF LET

1. Malaria is a disease caused by a tiny organism—a parasite—which lives on blood.
2. The only way the disease spreads from the sick person to healthy people is through the bite of female anopheline mosquito. The mosquito first picks up malaria parasite from a patient and passes it into healthy persons whom it bites next.
3. Fever with shivering, rise in temperature for a few hours, which comes down with sweating, are the early symptom. The patient also feels severe headache and pain in the limbs and back. The fever may come daily, on alternate days or every fourth day. In some cases it may be continuous.
4. DDT spraying of house leaves a fine layer of insecticide on the walls. When the malaria carrying mosquito sits on the wall, it is poisoned by DDT and does not live long enough to spread the disease.
5. Before spraying, household things, eatables, etc. should be covered. After spraying, walls of the house should not be white-washed or plastered for at least 6 weeks. The DDT should be allowed to remain effective for killing of malaria spreading mosquitoes.
6. Fever cases should be reported to Surveillance Worker during his visits to houses. All fever cases should give a drop of blood for examination. At the time of taking the blood, they will be given medicine. The blood test helps to find out whether the fever is due to malaria or not. Proved malaria cases will be given further complete treatment. Medicines given are to be taken as advised.
7. Nearly 75 million cases and a million deaths were due to malaria in India in 1952.
8. To check this scourge a nation-wide malaria control programme was launched in 1953, designed to protect 200 million people exposed to the risk of malaria residing in the areas, where disease was present to a very severe degree.
9. The control programme, brought down the incidence by about 50 per cent within three years by 1956.

10. Control Programme was switched over to National Malaria Eradication Programme in April, 1958 to protect entire population of the country with a view to eliminate the disease from India.

11. It is not correct to think that Malaria Eradication Programme is mosquito eradication. Mosquito eradication involves elimination of breeding places and other measures connected with sanitation and environment. Even if mosquitoes exist in large number on withdrawal of DDT spraying, they are not dangerous as they have no malaria parasite to transmit.

PLAN FOR PUBLICITY

The plan of operations for a publicity campaign for the malaria eradication (spraying) should include the following items (with the time factor mentioned):

A Pre-campaign publicity

A month before spraying operations to commence in an area, the following publicity work should be undertaken.

1. A radio broadcast about the importance of spraying with announcement of detailed spray schedule in the area covered by the particular radio station.

2. Malaria workers should move into the areas where the spraying is scheduled to be done and hold discussions with the local people and form an action committee.

3. Small displays could be arranged in local schools, panchayat garhs, etc. in those areas before the spraying is taken up.

4. Cinema slides could be exhibited in picture houses about the importance of spraying and the dates for spraying.

5. Newspaper advertisements should be given during the month, before the spraying. Space for these advertisements should be donated by voluntary organizations or philanthropic associations as otherwise it will be a very costly affair.

B. **During the spraying operations**

It will be useful to have the following publicity work done just before and during the spraying operations :

1. *Prabhat pheries* should be organized by school children a day previous to the spraying in a particular area. These children should carry placards (containing slogans) exhorting people to get their houses sprayed with DDT.
2. A film show can be organized a day or two before the spraying. It is necessary to get the suitable films for this work. The audience should be prepared for the film show and their doubts and apprehensions removed during this show.
3. Public meetings should be organized where questions that are bothering the people could be answered. Care should be taken to display posters, banners, etc., with the same slogans.

Handbills

Malaria is a very serious disease which makes its victims weak and emaciated. It is still present in our community, and effects all people irrespective of age, social status, economic condition, etc. Malaria can be prevented and ultimately eradicated if all the houses are sprayed with DDT. This has been achieved by many countries in the world and a large number of States in our own country.

People should take the National Malaria Eradication Programme as their own and accept DDT spraying. DDT incercepts transmission of malaria Hence....

*Get your houses sprayed with DDT.

*Report to the authorities if there are any fever cases in your house.

*Give a drop of blood (of fever cases) for examination.

*Take proper treatment.

By these four steps you can help in eradication of malaria.

MALARIA ERADICATION PROGRAMME

SLOGANS

1. Get every house sprayed with DDT.

2. One house missed for spray (with D.D.T.) is a danger to community.
3. Get all houses sprayed with D.D.T.
4. A single room in a house missed is a danger to the Family.
5. Get the entire house sprayed with D.D.T.
6. D.D.T. spray protects you and your community from malaria.
7. Accept D.D.T. spraying
   Help eradicate malaria from the nation.

People fighting malaria (radio talk material)

There is a knock at your door. It is the familiar "malaria house-visitor" on his periodic visit. He asks you the same old question : "Any fever case?". And perhaps, you reply "None", almost casually. But do you know that this small routine event in your day-to-day life is connected with something big that is going on in our country? This is a part of a big national programme to drive out malaria from our land. You may ask : "What is malaria?" We will answer this question presently.

The person who is asking you 'if there is any fever case in your family' is doing a great service not only to you but to the entire society and the nation. He is there to find out if any one in your family is suffering from malaria. Malaria fever can cause you great suffering and lead to epidemic in the community.

Do you know how you can recognise this fever when you have it? Well, malaria has certain recognisable signs. The temperature rises for a few hours and comes down with sweating. There is severe headache and pain in the limbs and the back. The fever may come daily, or on alternate days or every fourth day. Sometimes, it may be continuous.

Now that you know what are the symptoms of malaria, you may want to know how it is caused. This is very important because you can, then, take sufficient precautions to prevent this disease. Malaria is caused by a tiny organism, a parasite, as it is called, which lives on blood. The only way by which the disease can pass from one person to another is through the bite of mosquito called "anopheline". The mosquito requires a blood meal for development of

eggs. While feeding on the human blood, it takes in malaria parasites circulating in the blood of the affected person. These parasites multiply in the stomach of the mosquito and after ten days appear in its saliva. When it later bites a healthy man, it injects the parasites through its saliva into his blood. Thus malaria spreads from an infected to a healthy man.

Now you may have guessed why that "malaria house-visitor" called at your house. He was there obviously to find out if there was a fever case and finally to arrange for a blood sample to diagnose whether it is a case of malaria. If it is found to be malaria, the patient is advised to take proper treatment.

It is important that every case of malaria is treated early and cured, since, as you have learnt already, the disease spreads quickly from an infected person to the community through the mosquito.

You may ask : "Why let things pass until another person gets malaria? Why not prevent it? This is a wise question to raise. Our ancients said : "Prevention is better than cure". Now, let us find out how malaria can be prevented and thus finally also eradicated.

A mosquito which has taken in parasites from an affected person must live at least ten days before it is able to spread the disease by biting healthy persons. New cases of malaria can be prevented if the malaria-carrying mosquitoes are destroyed within ten days after taking the infective blood meal.

If we prevent new cases of malaria occurring for a period of three to four years, there will be no source of infection from which the mosquitoes can pick up the infection and spread it. Thus, malaria can be eradicated. When this happens, it does not matter how many mosquitoes remain. For there will be no chance for the mosquito to carry infection to healthy persons.

It is now clear to you that it is malaria that is being eradicated and not mosquitoes. The big programme we have spoken of is meant to eradicate malaria from our country. Surely, you will now realise why every citizen should co-operate by promptly reporting all fever cases, getting the blood examined of these cases and taking proper treatment as directed.

You may ask : What are we to do if mosquitoes come and bite us? How do we get rid of them? Well, the national programme provides for this in a big way. Mosquitoes, you know, enter the houses to take a blood meal and usually rest on the indoor walls and ceiling before and after biting. Very often, they rest indoors during the day time also. Now, to destroy these mosquitoes, we have what are called insecticides (insect-killers). They are sprayed on the surface of the walls. The mosquitoes die when they come into contact with the insecticide. So, don't you think it is our duty to get our houses sprayed ? Our national programme provides for spraying our houses to kill mosquitoes. When the spraying men come to your house, you should gladly let them do the spraying. You know it is extremely important and why. Please also do not plaster the walls for three months after spraying.

There is thus only one answer to your question : How will we eradicate malaria? It is only by your willing co-operation with the programme people in reporting fever cases, letting them have blood samples to detect cases and getting your houses sprayed when they visit your house for this operation.

Do you know that crores of rupees have been and are being spent on this programme of malaria eradication? You are bound to ask what benefits we have so far received from this plan. You will be surprised to hear that while 20 years ago over 100 million suffered and a million died of malaria every year, today, we hardly hear of malaria deaths and the number of cases have been brought down by over 99 per cent. Before this programme started, farmers constantly suffered from malaria, resulting in low production. But today, the farmer is generally free from this sickness and agricultural production has gone up. What a boon it would be if malaria were to be completely eradicated from our country.

Now that you know why it is necessary to eradicate malaria, let us recapitulate the important facts to be kept in view, namely, to report all fever cases to the house-visitors or to the nearest Primary Health Centre, to give blood samples when needed, and to co-operate with the spraying team in spraying your houses. Remember your willing cooperation in this programme is the only guarantee of its ultimate success.

2 NMEP/69—5000—21-6-71—GIPF.

ISSUED BY THE DIRECTORATE OF NATIONAL MALARIA ERADICATION PROGRAMME, 22, ALIPORE ROAD, DELHI-6 & PRINTED BY THE MANAGER, GOVERNMENT OF INDIA PRESS, FARIDABAD.